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ABSTRACT

This study investigated the adult adjustment of a statewide random sample of 737 Iowa individuals with learning disabilities, 59 individuals labeled behaviorally disordered, and 142 individuals labeled mentally disabled, all graduates of special education resource teaching programs. Results are reported in terms of: (1) general status information, such as marital status and living arrangements; (2) information about those competitively employed, such as wages, hours worked per week, and percent of living expenses paid; and (3) comparison of competitively employed versus unemployed individuals, in terms of high school vocational training and work experiences. Information is also provided on the postsecondary education and training of those interviewed, as well as on overall "successful" adult adjustment. Data are compared across the three disability areas and across gender, where relevant. The study found that about 90% of the graduates in each disability area were single, and two-thirds were living with parents or relatives. The largest proportion of competitively employed persons was found within the learning-disabled group (77%), followed by the mentally disabled (62%) and the behaviorally disordered (58%). (20 references) (Author/JDD)

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Iowa Statewide Follow-up Study

Adult Adjustment of Individuals with Mild Disabilities One Year after Leaving School

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Iowa Statewide Follow-up Study:

Adult Adjustment of Individuals with Mild Disabilities

One Year after Leaving School

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Preface

This monograph is one product of the Iowa Statewide Follow-up Study. Monographs have been developed, or are currently being completed, on the other major disability groups. An Action Group of the Iowa Statewide Follow-up Study Task Force has also been formed to draft specific programming recommendations based upon the data collected.

The follow-up study is a five-year project funded by the Iowa Department of Education, Bureau of Special Education, using EHA Part B discretionary funds. The purpose of this project is to determine the adult adjustment of special education graduates and dropouts (of all disabilities and program models) throughout the state of Iowa. The Iowa Statewide Follow-up Study is a joint effort of the Bureau of Special Education, Iowa Department of Education; the 15 Area Education Agencies in Iowa; Des Moines Public Schools; Iowa Braille and Sight Saving School; and the Division of Special Education, University of Iowa.

We gratefully acknowledge Merry Maitre, who originated the Iowa Statewide Follow-up Study; Dr. Timothy Z. Keith, who helped refine the data gathering procedures; Valerie Cool and Linda Cooper, who served as research associates for the project; and the Special Education Directors, Task Force members, and interviewers, who made the project a success. We also thank the individuals with disabilities who generously shared their stories and experiences with us.

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Abstract

This study investigated the adult adjustment of a statewide random sample of 737 individuals with learning disabilities, 59 individuals labelled behaviorally disordered, and 142 individuals labelled mentally disabled, all graduates of special education resource teaching programs. Results are reported in terms of: (a) general status information, such as marital status, living arrangements; (b) information about those competitively employed, such as wages, hours worked per week, percent of living expenses paid; and (c) comparison of competitively employed vs. unemployed individuals, in terms of high school vocational training and work experiences. Information is also provided on the postsecondary education and training of those interviewed, as well as on overall "successful" adult adjustment. Data are compared across the three disability areas and across gender, where relevant.

Iowa Statewide Follow-up Study:
Adult Adjustment of Individuals with Mild Disabilities
One Year after Leaving School

In the past few years, a number of studies have focused on the adult adjustment of former special education students (e.g., Fardig, Algozzine, Schwartz, Hensel, & Westling, 1985; Hasazi, Gordon, & Roe, 1985; Mithaug, Horiuchi, & Fanning, 1985). Of central concern in these investigations have been factors related to the employment status of persons after exiting high school. The individuals participating in these studies were, for the most part, mildly handicapped persons and results were reported for them as a group rather than by disability. Fardig et al. (1985) found that former students from rural counties were employed an average of 50% of the time after leaving high school, with a greater proportion of males than females working. Variables related to employment status were years of school completed and mathematics and reading level, while vocational coursework was a poor predictor of employment status. Hasazi, Gordon, and Roe (1985) reported that over half of their sample who exited Vermont high schools between 1979-83 were employed primarily in service occupations when interviewed, and that most found jobs through the "self-family-friend network." Employment outcomes were related to secondary vocational and training experiences (although not for those attending resource programs while in high school), and to part-time or summer work during high school. In addition, males were far more likely than females to be employed (66% compared to 33%). Mithaug et al. (1985) found that 69% of their sample of 1978 graduates of Colorado special education

programs were employed in jobs at minimal wages; most were living with their parents, and appeared to be financially dependent upon their families. Contrary to the Hasazi, Gordon, and Roe (1985) study, Mithaug et al. (1985) reported that special education teachers were a more important source of help to students in finding work than were their parents.

Other investigations have reported on the postsecondary adjustment of individuals for a specific disability area (e.g., learning disabilities, behavioral disorders, etc.). The findings of some of these studies are reviewed below.

Individuals with learning disabilities. Employment among individuals with learning disabilities (LD) ranges from 72% to 80% (deBettencourt, Zigmond, & Thornton, 1989; Schalock, Wolzen, Ross, Elliott, Werbel, & Peterson, 1986; Sitlington & Frank, 1990). The proportion of employed persons who were working full time differs between studies, with some (Sitlington & Frank, 1990) reporting over half employed full time, and others (Fafard & Haubrich, 1981; Schalock et al., 1986) reporting less than half working full-time. Of those employed, most were working in unskilled or semi-skilled jobs (Humes & Brammer, 1985; Sitlington & Frank, in press; White, Schumaker, Warner, Alley, & Deshler, 1980).

Recently, Okolo and Sitlington (1988) summarized the findings of follow-up studies that have focused on LD adults or included them in their sample. They pointed out that, despite methodological concerns about these studies, there were some consistent results. The individuals studied appeared to be employed at approximately the same rate as non-disabled peers. However, their employment was often part time and at entry level or minimum wage. Moreover, these individuals frequently received little vocational counseling in high school.

Individuals with behavioral disorders. A major limitation of follow-up research is the small number of studies that have included individuals with behavioral disorders and analyzed data separately for this group. The lack of published reports concerning dropouts with behavioral disorders is even more serious.

One recent study that focused on the adult adjustment of individuals labelled behaviorally disordered (Neel, Meadows, Levine, & Edgar, 1988) showed that: (a) less than one-fifth of the behaviorally disordered cohort had been involved in postsecondary training programs in comparison to almost one-half of the nonhandicapped sample; (b) BD persons were earning higher wages than the nonhandicapped group, in part due to the fact that a large number of the nonhandicapped cohort worked only part-time while attending school; (c) BD persons were far more likely to be unemployed than the national average for people their age; (d) twice as many BD persons earned less than $50 per week compared to nonhandicapped peers; (e) BD individuals were not using social service agencies; and (f) almost one-third of the BD persons were not involved in any job or training program at the time of the study.

Edgar and Levine (1987) reported data from a follow-up study of a cohort of 52 students with behavioral disorders that were included in the Neel et al. (1988) study. Fifty-five percent were employed 6 months after graduation; that proportion dropped to 49% by the second year after graduation. Twenty percent were earning the minimum wage 6 months after graduation; none earned the minimum wage 2 years after graduation. The number of students who were not engaged in meaningful activities rose from 10% at 6 months after leaving school to 30% for these same individuals out of school 2 years.

In a more recent study, Frank, Sitlington, and Carson (1989) reported that 58% of graduates and 30% of dropouts were employed full- or part-time one year after their high school class was graduated. Male graduates had the highest employment rate (61%), female dropouts had the lowest (9%). The majority of these individuals were employed as laborers or in service occupations, with graduates earning an average of $3.94 per hour and dropouts earning about $4.51 per hour. As was the case with employment rates, males were faring better than females in terms of mean wage per hour.

Individuals with mental retardation. A number of follow-up studies were conducted during the period of the 1950s through the 1970s with individuals classified as mentally retarded while attending school (Cassidy & Phelps, 1955; Dinger, 1961; Halpern, 1973; Peck & Stephens, 1968; Peterson & Smith, 1960; and Porter & Milazzo, 1958). These studies found that a large percentage of individuals had made satisfactory adjustments in employment. The vast majority of individuals, however, worked at unskilled or semiskilled occupations, with the largest number of jobs in the unskilled areas.

More recent studies have reported that between one-third and one-half of the individuals with mental disabilities were employed full-time, with females working less than males (Frank, Sitlington, Cooper, & Cool, in press; Hasazi, Gordon, Roe, Hull, Finck, & Salembier, 1985). Most individuals in these studies worked in low status occupations as service workers or laborers. These investigations also examined the association between high school "predictor" variables (vocational education, part-time employment, and work experience programs) and current employment status. Hasazi, Gordon, Roe, Hull, Finck, & Salembier (1985) found a marginal association between vocational education and employment status, whereas Frank et al. (in press),

found little support for vocational education as a predictor variable, although it should be noted that almost all individuals had some type of vocational training in high school and the quality and amount of training was not known. Hasazi, Gordon, Roe, Hull, Finck, & Salembier (1985) reported higher employment rates among those who had paid jobs while in high school; Frank et al. (in press) found no such association between high school employment and current employment status. Neither study found a statistically significant association between participation in high school work experience programs and current employment status.

Although data exist on individuals with mild disabilities as a group and on separate disability groups, very little information is available which compares the adult adjustment of individuals across disability areas and which examines a concept of adult adjustment broader than employment. The purpose of this study was to compare the adult adjustment of high school graduates viewed as mildly disabled across the disability areas of learning disabilities, behavioral disorders, and mental disabilities. Differences based on gender were also examined. For the purposes of this study, individuals were viewed as mildly disabled if they were served in resource teaching programs in high school. The target group was restricted to individuals labelled learning disabled, behaviorally disordered, or mentally disabled in order to provide numbers sufficient to allow for analysis across disability areas.

Method

Subjects

The present investigation was a component of the Iowa Statewide Follow-up Study, a 5-year project designed to study a random sample of special education

students of all disabilities and program models. The subjects included in this investigation were drawn from two separate high school classes (Classes of 1985 and 1986), each surveyed one year after their class was graduated. Each of the fifteen Area Education Agencies (AEAs) in the state of Iowa prepared a list of special education students (all exceptionalities) who were graduated from, or "aged out" of, high school at the end of the target year; a similar list was prepared of all special education dropouts who would have completed high school at the end of the target year. For each AEA, 50% of the students on each list (graduates and dropouts) were randomly selected for inclusion in the sample each target year.

Of the total sample of 2,476 former special education students, 1,249 had been identified as LD, 292 as BD, and 840 as MD. Of this group 885 individuals with learning disabilities were high school graduates from resource programs, along with 75 individuals with behavioral disorders, and 173 with mental disabilities. The resource program graduates actually interviewed included 737 (83%) LD individuals, 59 (79%) BD individuals, and 142 (82%) MD individuals. Resource programs were those in which students were placed for a minimum of 30 minutes per day; students in these programs attended regular classes for the remainder of each school day.

Iowa Department of Education rules require that students labelled MD must have an IQ of greater than one standard deviation below the mean on an individually administered intelligence test and exhibit an adaptive behavior deficit. This definition encompasses a higher functioning population than does the more common definition utilizing a two standard deviation cutoff point on intelligence tests.

The mean full-scale IQ scores for LD, BD and MD students, respectively, were 95.2 (SD=8.8), 96.4 (SD=12.3), and 77.7 (SD=5.7). Mean reading grade equivalent scores for these three groups were 6.9 (SD=2.4), 8.6 (SD=2.3), and 6.0 (SD=2.2), respectively; mean math grade equivalent scores were 7.7 (SD=2.5), 7.8 (SD=2.6), and 6.2 (SD=1.7).

Instrumentation

Representatives from the 15 AEAs and selected schools in the state of Iowa participated in the development of the survey instrument, which was field-tested on a random sample of 878 subjects from throughout the state.

Information sought from school records and interviews included the following: background information (e.g., test scores from high school, disability label, program model); information pertaining to high school program (e.g., number of regular and special vocational education courses taken, extracurricular activities); information about current life circumstances (e.g., marital status, living arrangements, leisure activities); and information on past and current employment (e.g., job experiences during high school, location of job, salary, hours worked).

Procedure

Interviews were conducted by professionals such as work experience coordinators, consultants, school psychologists, and teachers from the student's school district or AEA. Interviewers were supervised by the follow-up project task force member from their respective AEA. In addition, project staff developed an in-depth interviewer handbook and sample interview forms and conducted training sessions to ensure consistency across interviewees. The project director was on call to answer any questions arising from actual interviews. Where possible, interviews were conducted

face-to-face with the former student. When an individual could not be contacted either in person or by telephone, a parent or guardian was interviewed. Of the interviews analyzed in this study, 45% were face-to-face with the former student, 30% were by telephone with the former student, 10% were face-to-face with a parent or guardian, and 15% were through a telephone interview with a parent or guardian. Data analyses were conducted using routines described in the SPSS-X User's Guide (1986).

Results are reported in four sections. The first addresses the general status of the former students. In the second section, competitively employed individuals are further described. The third section contains a comparison of competitively employed and unemployed individuals on selected variables. The fourth section provides a summary of the percent of persons who were judged to have made a "successful" adjustment to post-high school life. Since a number of other adult adjustment studies (e.g., Edgar, Levine, Levine, & Dubey, 1988; Frank et al., 1990; Sitlington & Frank, 1990; Hasazi, Johnson, Hasazi, Gordon, & Hull, 1989) have found gender differences, data are reported here by gender as well as disability area.

Results

Current Status

About ninety percent of the graduates in each disability area reported they were single; most of the remaining persons were married. The most common place of residence was with parents or relatives, with approximately two-thirds indicating this living arrangement (see Table 1). When place of residence was viewed by gender, females lived independently more frequently than males, particularly those labelled BD. Only a very small proportion said they were living in some type of residential facility or supervised housing.

Table 1

Place of residence and employment status

	Disability								
	LD			BD			MD		
Variable	Males	Females	Total	Males	Females	Total	Males	Females	Total
Place of residence	(n=531)	(n=204)	(n=737)[a]	(n=45)	(n=14)	(n=59)	(n=59)	(n=83)	(n=142)
Parents or relatives	65[b]	54	62	64	43	59	81	59	68
Live with friend	6	8	6	9	7	9	0	5	3
Live independently	18	27	20	4	50	15	12	21	17
Buying own home	1	5	2	2	0	2	3	6	5
Supervised living	1	1	1	2	0	2	0	2	1
Residential facility	0	1	<1	4	0	3	0	0	0
Other	10	5	9	14	0	10	3	7	6
Employment status	(n=531)	(n=204)	(n=737)[a]	(n=45)	(n=14)	(n=59)	(n=59)	(n=83)	(n=142)
Competitive employment	80	67	77	62	43	58	71	56	62
Sheltered employment[c]	2	3	3	2	0	2	9	4	6
Homemaker	0	8	2	0	14	3	0	10	6
Student	5	9	6	11	7	10	0	8	5
Job training	<1	2	1	7	0	5	3	0	1
Unemployed	12	11	12	18	36	22	17	23	21

[a] n's for Males and Females don't sum to n for Total because gender was not specified on two survey forms.

[b] Values are expressed as percentages (rounded to nearest whole number) by column within each variable.

[c] Sheltered employment here includes both sheltered workshops and community work, but employed by a sheltered workshop.

Most respondents were involved in from 1 to 3 leisure activities; a small proportion reported they participated in no leisure activities.

Participants were asked to describe the types of education or training experiences they had been involved in since leaving high school. The proportions of persons who had received no postsecondary education or training ranged from 49% (BD) to 70% (MD), with 54% of LD persons not receiving any such training. When examined by gender, smaller proportions of LD and BD males than females had no postsecondary training (52% vs. 58% for LD; 42% vs. 71% for BD). The reverse was true for MD persons, where 73% of the males and 68% of the females had no postsecondary training. Among those who had participated in such programs, the most frequently mentioned experience (named by between 10% and 22%) was in a community college program; more LD and BD males than females attended these programs, whereas about twice as many MD females as males received training in community college programs. The second most commonly mentioned option for LD males, as well as BD males and females, was military training. Fewer than 5% of the individuals in any category had attended a four year college.

Characteristics of Competitively Employed

The employment status of participants is presented in Table 1. The largest proportion of competitively employed persons was found within the LD group (77%); lower employment rates were reported by the BD and MD groups (58% and 62%, respectively). Less than 10% of the individuals in any of the disability groups indicated they worked in sheltered employment or in the community, but employed by a sheltered workshop. The unemployment rate was lowest for LD persons (12%); about one-fourth of the BD and MD individuals reported they were unemployed. A larger proportion of males than females

within each disability group were employed; for BD persons the difference approached 20%.

The proportion of those "otherwise engaged" (i.e., full-time student, homemaker, or in job training) ranged from 3% for males labelled mentally disabled to 21% for females labelled behaviorally disordered.

Since less than 10% of any one group was in sheltered employment or in the community, but employed by a sheltered workshop, and since it was felt that the employment goal for individuals with mild disabilities should be competitive employment, the employment data were further analyzed only for this group. For the purpose of this study, "competitive employment" was defined as working as an individual in the community with nonhandicapped workers.

Participants were asked during the interview to identify the type of job they currently held. Each interviewer categorized jobs according to a system developed by Duncan (Reiss, Duncan, Hatt, & North, 1961). The proportion of competitively employed persons in each job classification is summarized in Table 2. Approximately two-thirds of the persons in each disability group were employed in low status occupations as laborers or service workers. When job classification was examined by gender, males were far more likely to be working as laborers, whereas females most often were employed as service workers.

Hourly wages of participants are reported in Table 3. The mean wage for each disability group was above the current minimum wage of $3.35 per hour. *t*-tests were run to compare mean wages for males and females within each disability group. Significant findings were found in two comparisons. For LD persons, t (479) = 6.54, $p<.001$; and for MD individuals, t (66) = 4.90,

Table 2

Current job classification - competitively employed

	Disability								
	LD			BD			MD		
Job classification	Males (n=404)	Females (n=132)	Total (n=537)[a]	Males (n=26)	Females (n=6)	Total (n=32)	Males (n=37)	Females (n=45)	Total (n=82)
Laborer	47[b]	8	37	35	0	28	51	7	27
Service Worker	19	71	32	27	83	38	19	82	54
Operative[c]	15	5	12	12	0	10	19	11	15
Farmer	2	1	2	4	0	3	0	0	0
Craftsman	10	0	8	15	0	13	8	0	4
Protective service	2	1	2	0	0	0	0	0	0
Proprietor	0	1	<1	0	0	0	0	0	0
Clerical	1	6	2	0	0	0	0	0	0
Technical	1	1	1	8	0	6	3	0	1
Sales	1	2	1	0	0	0	0	0	0
Professional 1	2	2	2	0	0	0	0	0	0
Manager	2	2	2	0	17	3	0	0	0
School Teacher	<1	1	<1	0	0	0	0	0	0

[a] n's for Males and Females don't sum to n for Total because gender was not specified on one survey form.

[b] Values are expressed as percentages (rounded to nearest whole number) by column.

[c] E.g., meat cutter, assembler, machine operator, truck driver, shipping clerk.

Table 3

Wages, time worked in current job, and living expenses paid - competitively employed

	Disability								
	LD			BD			MD		
Variable	Males	Females	Total	Males	Females	Total	Males	Females	Total
Wages per hour	(n=359)	(n=122)	(n=483)[a]	(n=20)	(n=5)	(n=25)	(n=28)	(n=40)	(n=68)
< $3.35	5[b]	22	9	10	40	16	4	30	19
$3.35 - 3.95	29	55	36	35	40	32	29	55	44
> $3.95	66	23	55	55	20	48	68	15	37
M	$4.68	$3.57	$4.40	$4.74	$2.88	$4.37	$4.27	$3.21	$3.65
SD	$1.73	$1.19	$1.68	$2.66	$1.60	$2.57	$0.86	$0.88	$1.02
Hours per week	(n=413)	(n=132)	(n=547)[a]	(n=26)	(n=6)	(n=32)	(n=39)	(n=45)	(n=84)
< 21	6	11	7	8	0	6	10	20	16
21 - 37	18	37	23	23	50	28	10	29	20
> 37	76	52	70	69	50	66	80	51	64
Length of time employed	(n=413)	(n=132)	(n=547)[a]	(n=26)	(n=6)	(n=32)	(n=39)	(n=45)	(n=84)
< 6 months	43	52	45	54	67	56	39	44	42
6 months - 1 year	27	24	27	31	17	28	28	20	24
1 - 2 years	20	21	20	4	17	6	15	24	20
> 2 years	9	5	8	12	0	9	18	11	14
Living Expenses Paid	(n=411)	(n=132)	(n=545)[a]	(n=25)	(n=6)	(n=31)	(n=39)	(n=44)	(n=83)
None	17	19	17	20	33	23	28	27	28
< Half	39	43	41	28	17	23	41	34	37
> Half	14	8	13	16	17	16	8	9	8
All	29	30	29	36	33	36	23	30	27

[a] n's for Males and Females don't sum to n for Total because gender was not specified on two survey forms.

[b] Values, other than means and standard deviations, are expressed as percentages (rounded to nearest whole number) by column within each variable.

$p<.001$. In both cases, males had the higher mean wage. A significant statistic was not obtained in the t-test comparing mean wages for male and female BD persons; however, only five females and twenty males were involved in this analysis. In practical terms (i.e., buying power), BD males had almost a $2.00 per hour advantage over females. One-way ANOVAs were conducted across the three disability groups; one for males only, the other for females only. No significant differences were obtained in these two ANOVAs.

The amount of time persons were working per week was also examined. Chi-square tests were conducted to study the relation between gender and hours worked per week. A significant statistic was obtained for LD persons, χ^2 $(2, n=545) = 26.77$, $p<.001$. An inspection of the percentages in Table 3 shows that a greater proportion of males than females were employed full time (three-fourths compared to one-half), while more females than males were employed between half and full time. Approximately equal numbers of males and females were employed less than half time. A significant statistic was also obtained for MD persons, χ^2 $(2, n=84) = 7.48$, $p=0.024$. A pattern similar to that of LD persons emerged, where a substantially greater proportion of males than females were employed full time. A comparison of the percentages for BD individuals revealed that males once again were employed full time in a greater proportion than females; however, a chi-square test was not conducted because a sufficient number of subjects was not available. There was no significant difference in hours worked for either males or females across disability areas.

Length of time employed in present job was also of interest (see Table 3). Chi-square tests did not result in significant differences between males and females in any of the disability groups. At least two-thirds had been

employed in their current job for less than one year, with 84% of the persons with behavioral disorders being employed for less than one year. Twenty percent of those labelled learning disabled or mentally disabled had been employed for 1-2 years, while only 6% of those labelled behaviorally disordered had worked in the same job for this length of time. There was no significant difference related to length of time in the same job when examined across disability areas.

Participants were asked what proportion of their living expenses they paid themselves (see Table 3). Chi-square tests did not reveal any gender differences. Approximately one-half to two-thirds of the competitively employed individuals paid less than half of their living expenses, while one-fourth to one-third paid all their living expenses. Among the three disability groups, persons with behavioral disorders most often paid all their expenses (36%, compared to 29% and 27%, respectively, for LD and MD persons).

Data concerning the types of job benefits received were collected during the interview. The most frequently mentioned benefits were vacations and health insurance (by one-fourth to one-third of the respondents). A greater proportion of males than females in each disability area were receiving these benefits, with the exception of MD persons, where a greater percentage of females than males were given vacation time. Of particular concern was the fact that none of the BD females was receiving health insurance benefits, whereas one-third of the males were covered by a health insurance plan.

Sources of help in finding work were also explored during the interview (see Table 4). Respondents were asked who was primarily responsible for helping them find their present job. Over 80% of the individuals in each disability group said they utilized the "self/family/friend" network to find

Table 4

Sources of help in finding work - competitively employed

Source of help	Disability								
	LD			BD			MD		
	Who helped you find current job?			Who helped you find current job?			Who helped you find current job?		
	Males (n=411)	Females (n=132)	Total (n=545)*	Males (n=26)	Females (n=6)	Total (n=32)	Males (n=39)	Females (n=45)	Total (n=84)
Myself	41[b]	52	44	27	33	28	31	40	36
Family/friends	43	34	41	50	67	53	49	47	48
School personnel	5	6	5	4	0	3	3	4	3
Community agencies	4	4	4	8	0	6	10	7	8
Other	6	5	6	12	0	9	8	2	5
	Which agencies could help you? (n=547)	Which agencies have you contacted? (n=547)		Which agencies could help you? (n=32)	Which agencies have you contacted? (n=32)		Which agencies could help you? (n=84)	Which agencies have you contacted? (n=84)	
Vocational Rehabilitation	3	10		0	3		1	16	
Job Service	62	51		69	53		61	54	
JTPA	5	18		9	13		7	24	
College Staff	4	13		3	19		6	10	

* n's for Males and Females don't sum to n for Total because gender was not specified on two survey forms.

[b] Values are expressed as percentages (rounded to nearest whole number).

work. Chi-square tests did not suggest any gender or disability label differences concerning sources of assistance in finding work. Ten percent or fewer of the individuals reported that school personnel or community agencies had been the primary source of help. Participants also were asked to list agencies they would go to for help in the event that they were looking for work. The most frequently named source of help was Job Service of Iowa (61% to 69%), with other agencies a distant second. Individuals were asked to identify agencies on a list read to them which they had talked to in the past concerning help in finding work. The agency most commonly talked to was Job Service of Iowa, with Job Training Partnership Act agencies second among LD and MD individuals and college personnel second among BD persons.

Comparison of Competitively Employed/Unemployed

Competitively employed persons were compared with unemployed persons in two areas related to high school experiences: vocational training and part-time jobs. Persons who were "otherwise engaged" (i.e., homemakers, full-time students, or in job training) were not included in this comparison. Three categories of vocational training were investigated. A chi-square test was conducted to examine the relation between the first category, regular vocational training, and current employment status (competitively employed vs. unemployed) for each disability group. Regular vocational training was divided into two subcategories, general and specific. General vocational training included industrial arts and home economics, while specific vocational training involved office education, health occupations education, distributive education, agricultural education, and trades and industry. Significant results were not obtained in this analysis. Of those persons labelled LD who had general vocational training while in high school, 84% were

employed in competitive jobs; a similar pattern held true for those with specific vocational training experiences, as well as those with no regular vocational training (see Table 5). Eighty-five percent of the BD individuals with general vocational training were competitively employed, while 68% with specific training and 60% with no training held competitive jobs. Among MD individuals with general vocational training, 79% had competitive jobs, and 71% of those with specific training held such jobs; only 50% of those with no regular vocational training were competitively employed. These results should be viewed with caution, since the number of individuals with no regular vocational training was quite small.

The second category of vocational education examined was specially-designed vocational training, which included such experiences as school-based simulated work, experiential exploration, work experience, etc. Chi-square tests did not reveal any significant statistics concerning the relation between specially-designed vocational training and employment status. Eighty-five percent of the LD individuals who had participated in at least one type of specially-designed vocational training program had competitive jobs (see Table 5). Three-fourths of the BD and MD persons with at least one type of specially-designed vocational training were employed in competitive jobs.

A third category of vocational training, work experience, was also examined (this is actually a subcategory of specially-designed vocational training). Chi-square tests did not reveal any significant associations between work experience and employment status. Of those LD persons with work experience training, 82% were in competitive jobs, whereas three-fourths of the BD and MD individuals with work experience training were employed in the competitive job market.

Table 5

Employment status by types of high school vocational training

	Disability					
	LD		BD		MD	
Variable	Employed	Unemployed	Employed	Unemployed	Employed	Unemployed
Regular						
None	82 (22)[a]	18 (5)	60 (3)	40 (2)	50 (3)	50 (3)
General only	84 (193)	16 (36)	85 (11)	15 (2)	79 (38)	21 (10)
Specific[b]	88 (342)	12 (48)	68 (19)	32 (9)	71 (46)	29 (19)
Specially-designed[c]						
None	86 (338)	14 (54)	71 (17)	29 (7)	71 (40)	29 (16)
At least one type	85 (228)	15 (40)	74 (17)	26 (6)	75 (48)	25 (16)
Work experience[d]	82 (121)	18 (27)	75 (12)	25 (4)	75 (24)	25 (8)
No work experience	87 (445)	13 (67)	71 (22)	29 (9)	73 (64)	27 (24)

Note. Persons "otherwise engaged" (i.e., homemaker, student, in job training) were not included in the analyses reported in this table.

[a] Values are expressed as percentages (rounded to nearest whole number) by row within type of disability. Numbers in parentheses indicate n sizes.

[b] Individuals also may have had general training.

[c] Individuals also may have had regular training.

[d] Individuals also may have had other specially-designed training.

The relation between part-time jobs in high school and current employment status was examined using chi-square tests. Paid employment was defined as at least one paying job (subsidized or unsubsidized) during high school. A significant statistic was obtained for LD persons, χ^2 (1, n=607) = 13.30, p<.001. Among those with a paid job while in high school, 87% were competitively employed, whereas 71% of those without a paid job while in high school held a job in competitive employment at the time of the interview. A significant chi-square statistic was also obtained for MD persons, χ^2 (1, n=99) = 5.11, p=.024. Seventy-seven percent of those with at least one paying job in high school were competitively employed, vs. 50% of those with no paid employment in high school. A significant chi-square statistic was not obtained for the BD group concerning this variable. For BD individuals with a paid job experience in high school, 77% were employed, and 63% of those with no such experience were employed at the time of the interview.

"Successful" Graduates

A composite of a "successful" graduate was formulated utilizing several variables in the data set. Halpern (1985) has proposed that measures of successful community adjustment involve not only employment, but include a residential and social/interpersonal component as well. Thus, successful graduates were defined in the present study as: (a) employed (full or part time) in a competitive job, a homemaker, a full-time student, or in a job training program; (b) buying a home, living independently, or living with a friend; (c) paying at least a portion of their living expenses; and (d) involved in more than three leisure activities. Among the LD subjects in this study, 22 (4%) of the males and 21 (10%) of the females met these criteria. None of the BD males and 1 (7%) of the BD females were judged to be

successful. Among MD persons, 2 (3%) of the males and 3 (4%) of the females were viewed as having made a successful adult adjustment.

Since the participants in this study had been out of high school only one year, the above criteria were perhaps too high in some areas. Therefore, a second set of criteria was used to assess the adult adjustment of the graduates. This set categorized individuals as successful if they were: (a) employed (full or part time) in a competitive job, a homemaker, a student, or in a job training program; (b) buying a home, living independently, living with a friend, or living with a parent or relative; (c) not necessarily paying any of their living expenses; and (d) involved in at least one leisure activity. Using this second set of criteria, an additional 345 (65%) of the LD males and 132 (65%) of the LD females were classified as successful. An additional twenty-three (51%) of the BD males and 8 (57%) of the BD females were viewed as successful. Among the MD persons, another 36 (61%) of the males and 47 (57%) of the females were judged to be successful.

Discussion

The purpose of this investigation was to measure the adult adjustment of individuals from the three major disability groups, learning disabilities, behavioral disorders, and mental disabilities, and to compare these findings across the disability groups and across gender.

Adult Adjustment Status

The proportions of individuals in this investigation who were employed in competitive jobs ranged from 58% (BD) to 77% (LD). These figures compare favorably with those reported by Hasazi, Gordon, and Roe (1985), who found that 62% of their subjects who had attended resource programs were employed in unsubsidized jobs, and Mithaug et al. (1985) who reported a 69% employment

rate. The MD subjects in the present study were also employed at a higher rate than the EMR subjects in the Hasazi, Gordon, Roe, Hull, Finck, & Salembier (1985) study (62% vs. 47%). Individuals with learning disabilities were employed at approximately the same rate (77%) as those in other studies (deBettencourt et al., 1989; Schalock et al., 1986). The 58% employment rate of individuals with behavioral disorders also was in line with statistics reported by Edgar and Levine (1987).

The quality of employment of persons in this study is of concern as most were working in unskilled or semiskilled jobs. Related to this concern is the low level of participation in postsecondary training. Further study is needed to identify possible barriers to obtaining such training. Since the most frequently named programs were offered through community colleges, research efforts might best be focused on programs on these college campuses.

The fact that approximately 60% of each disability group still lived with parents or relatives is in keeping with other studies (Edgar et al., 1988; Mithaug et al., 1985). This, and the fact that over 20% of those interviewed stated that they paid none of their living expenses, indicates that the goal of independent living has not been met--even for these mildly disabled individuals. Although some of this is possibly related to the hours worked and wages earned, the lack of such independence indicates the need for emphasis on living arrangements as a major component of transition planning. If living at home proves to be the most efficient or desired arrangement for these individuals, then our high school programs need to include instruction in functioning as independently as possible in this environment.

The present study obtained no significant results in the analyses involving the two predictor variables of high school vocational education and

work experience programs, and current employment status. This agrees with the findings of Hasazi, Gordon, and Roe (1985) for those who had attended special education resource programs in high school, although a marginal association was found for EMR individuals (Hasazi, Gordon, Roe, Hull, Finck, & Salembier, 1985). It should be pointed out, however, that almost all individuals in this study had participated in some form of regular vocational education in high school; thus, an adequate comparison between those with and without such education could not be made. Hasazi, Gordon, and Roe (1985) did find a significant association between paid employment while attending high school and current employment status, a finding that was also found for EMR persons (Hasazi, Gordon, Roe, Hull, Finck, & Salembier, 1985). Similar results were obtained in the present study for LD and MD individuals, but not for BD persons.

Gender Differences

Several differences were obtained relative to gender in the present study which suggest that females have adjusted less well to adult life than males in terms of employment. First, a higher proportion of females than males were unemployed among individuals with behavioral disorders (18% difference) and mental disabilities (6% difference). The disparity in the proportion of females to males (33%) reported by Hasazi, Gordon, and Roe (1985) was greater than that in the present study; our findings were similar to Edgar et al. (1988).

Second, females were employed in jobs that were less desirable than those held by males in several important ways. The mean wage per hour was substantially less for females than males in all three disability groups (statistically significant for LD and MD). Females were also more often

employed part time than were males. These findings concerning amount of time employed were statistically significant for LD and MD persons (the trend for BD persons was also in this direction). A smaller proportion of females than males were receiving job benefits concerning health insurance and vacation time; an exception was with MD females who more frequently received vacation time than males. Part of this difference may be related to the fact that males were more often in laborer jobs and females were in service jobs. The fact remains, however, that a more concentrated effort needs to be made to train and place females in occupations which will allow them to live independently in terms of wages and job benefits earned.

Differences Across Disabilities

The differences across disabilities are mixed. The unemployment rate for individuals with mental disabilities or behavioral disorders was 10% higher than for those with learning disabilities. Individuals with learning disabilities or mental disabilities were also apparently helped by having part-time employment in high school, while individuals with behavioral disorders were not. On the other hand, there were no significant differences among the three groups in hourly wages, hours worked per week, or length of time on present job, and percent of individuals still living at home was similar across the three groups. Perhaps what these data tell us is that we should return to what special education is all about--identifying the strengths and needs of each individual and designing instruction and experiences to fit these strengths and needs.

What Does This All Mean?

The results of this investigation should be viewed with the following possible limitations in mind. First, a considerable portion of the data were

obtained through self-report of the persons interviewed. In addition, all subjects had attended high school special education programs in the state of Iowa; thus, results may not be generalizable to other geographic areas. Over time, too, economic conditions may change which could affect the adult adjustment of persons with disabilities.

Even with these limitations, the composite of "successful" adult adjustment does not yield a positive picture for any of the three categories of mildly disabled. Those judged "successful" by the stringent criteria ranged from 0% to 10%. Even when the criteria were lowered to what most would view as minimal adult adjustment, from 25% to 50% of the individuals interviewed still failed to meet these criteria.

Many professionals feel that transition planning should be focused on those with more severe disabilities. Although this group certainly requires these services, data from the current study indicate that individuals with mild disabilities being served in resource programs also need to be involved in a systematic transition planning process as they move from school to adult life.

This planning process should involve three major phases (Halpern, 1985). First, the foundation should be laid, beginning in the elementary years. This foundation should involve the basic concepts of career and vocational education, in which students and their parents begin to examine potential living and working environments and the students' strengths, interests, and needs.

Second, the bridge between school and adult life should be built, beginning at the latest in the junior high school years. This involves making students and parents aware of adult service providers and beginning to

determine employment, living, and social/interpersonal options for students as adults. We need to train individuals to be more effective self-advocates, as well as provide the needed support as students cross this bridge. Over 80% of the competitively employed individuals in this study used the self-family-friend network to find their current job.

Finally, we need to provide the support needed to ensure each individual's continued adjustment after leaving school. This requires training students to access the support services of relevant adult service providers and involving these agencies early in the transition planning process. It also may require that school personnel "stay longer" with the individuals--that they continue to work as part of the transition planning team even after the individual leaves school.

Our data show that transition planning is a necessity--even for individuals with mild disabilities. Since these individuals will be served primarily or entirely in the regular classroom, we need to integrate transition planning into the Individualized Educational Plan (IEP) process and into regular education. This means involving guidance counselors, at-risk coordinators, vocational educators, and other regular education personnel in the process. To do less may well result in an unsatisfactory adult adjustment for graduates of programs for students with mild disabilities.

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